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THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA 30339-5948

EXAMINER	
CHAU, COREY P	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/685,034	**Applicant(s)** THIEL, JAMES
	Examiner Corey P. Chau	**Art Unit** 2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2005*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-38* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-38 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5617480 to Ballard et al. (hereafter as Ballard).

3. Regarding Claim 1, Ballard discloses a system for adjusting the frequency response of subwoofer systems comprising: a user interface (16) configured to receive at least one user-adjustable variable (i.e. PC software preferably provides the Graphical User Interface (GUI) to control the entire design system)(Figs. 4, 5, and 6), the user-adjustable variable being purely indicative of a characteristic of a main speaker(S1,S2,crossover,delay)(Figs 4, 5, and 6; column 5, line 51 to column 6, line 37); and a compensation circuit (48) configured to produce a desired subwoofer signal (44,46) from an input signal (32,34) in response to the user-adjustable variable (i.e. in response to the user-adjustable variable for the subwoofer speaker characteristic, the compensation circuit produces a desired subwoofer signal)(Figs. 3, 4, 5, and 6; column 2, lines 46-53).

4. Regarding Claim 2, Ballard discloses the main speaker characteristic comprises low-frequency characteristic of a main speaker (i.e. low pas filter) (Figs. 3; 4, and 5; column 5, lines 13-22).

5. Regarding Claim 3, Ballard discloses the user adjustable variable comprises a low-frequency cutoff frequency (Fig. 6).

6. Regarding Claim 4, Ballard discloses the user adjustable variable comprises a low-frequency damping factor (i.e. in each IIR equalization section, the center frequency F, Q, and bandpass gain G may be set by the designer)(Fig. 5; column 5, lines 34-44).

7. Regarding Claim 5, Ballard discloses the user adjustable variable comprises a speaker sensitivity factor (Figs. 4, 5, and 6).

8. Regarding Claim 6, Ballard discloses the user adjustable variable comprises an enclosure type (column 9, lines 5-15).

9. Regarding Claim 7, Ballard discloses the user adjustable variable comprises a gain factor (i.e. in each IIR equalization section, the center frequency F, Q, and bandpass gain G may be set by the designer)(Fig. 5; column 5, lines 34-44).

10. Regarding Claim 8, Ballard discloses a method for adjusting the frequency response of subwoofer systems comprising the steps of: receiving at least a user-adjustable setting (16)(Fig. 1; column 4, lines 6-29), the user-adjustable setting being purely indicative of a main speaker characteristic (S1,S2,crossover,delay)(Figs. 4-8; column 5, line 51 to column 6, line 37); and producing a desired subwoofer signal (44,46) in response to receiving the user-

adjustable setting (48) (i.e. in response to the user-adjustable variable for the subwoofer speaker characteristic, the compensation circuit produces a desired subwoofer signal)(Figs. 3, 4, 5, and 6; column 2, lines 46-53).

11. Claim 9 is essentially similar to Claim 2 and is rejected for the reasons stated above apropos to Claim 2.

12. Claim 10 is essentially similar to Claim 3 and is rejected for the reasons stated above apropos to Claim 3.

13. Claim 11 is essentially similar to Claim 4 and is rejected for the reasons stated above apropos to Claim 4.

14. Claim 12 is essentially similar to Claim 5 and is rejected for the reasons stated above apropos to Claim 5.

15. Claim 13 is essentially similar to Claim 6 and is rejected for the reasons stated above apropos to Claim 6.

16. Claim 14 is essentially similar to Claim 7 and is rejected for the reasons stated above apropos to Claim 7.

17. Regarding Claim 15, Ballard discloses a system for adjusting the frequency response of subwoofer systems comprising: means for receiving at least one user-adjustable setting (16)(Fig. 1; column 4, lines 6-29), the user-adjustable setting being purely indicative of a main-speaker characteristic (S1,S2,crossover,delay)(Figs. 4-8; column 5, line 51 to column 6, line 37); means for receiving an input signal (32,34)(Figs. 2 and 3); and means for producing a desired subwoofer signal (44,46) from the input signal (32,34) in response to the adjustable setting (i.e. in response to the user-adjustable variable for the

subwoofer speaker characteristic, the compensation circuit produces a desired subwoofer signal)(Figs. 3, 4, 5, and 6; column 2, lines 46-53).

18. Claim 16 is essentially similar to Claim 2 and is rejected for the reasons stated above apropos to Claim 2.

19. Claim 17 is essentially similar to Claim 3 and is rejected for the reasons stated above apropos to Claim 3.

20. Claim 18 is essentially similar to Claim 4 and is rejected for the reasons stated above apropos to Claim 4.

21. Claim 19 is essentially similar to Claim 7 and is rejected for the reasons stated above apropos to Claim 7.

22. Regarding Claim 20, Ballard discloses a system for adjusting the frequency response of subwoofer systems comprising: a user interface (16) configured to receive at least a user-adjustable variable (i.e. PC software preferably provides the Graphical User Interface (GUI) to control the entire design system)(Figs. 4, 5, and 6), the user-adjustable variable comprising: a first variable that is purely indicative of a main speaker characteristic (S1,S2,crossover,delay)(Figs. 4-8; column 5, line 51 to column 6, line 37); and a second variable that is not purely indicative of a main speaker characteristic (LF,RF,F,LR,RR,R,ALL)(Figs. 4-6); and a compensation circuit (48) configured to produce a desired subwoofer signal (44,46) from an input signal (32,34) in response to the user-adjustable variable (Figs. 3, 4, 5, and 6; column 2, lines 46-53).

23. Regarding Claim 21, Ballard discloses the main speaker characteristic comprises a low-frequency characteristic of a main speaker (i.e. low pas filter) (Figs. 3; 4, and 5; column 5, lines 13-22).

24. Regarding Claim 22, Ballard discloses the user adjustable variable comprise a low-frequency cutoff frequency (Fig. 6).

25. Regarding Claim 23, Ballard discloses the user adjustable variable comprise a low-frequency damping factor (i.e. in each IIR equalization section, the center frequency F, Q, and bandpass gain G may be set by the designer)(Fig. 5; column 5, lines 34-44).

26. Regarding Claim 24, Ballard discloses the user adjustable variable comprise a speaker sensitivity factor (Figs. 4, 5, and 6).

27. Regarding Claim 25, Ballard discloses the user adjustable variable comprise an enclosure type (column 9, lines 5-15).

28. Regarding Claim 26, Ballard discloses the user adjustable variable comprise a gain factor (i.e. in each IIR equalization section, the center frequency F, Q, and bandpass gain G may be set by the designer)(Fig. 5; column 5, lines 34-44).

29. Regarding Claim 27, Ballard discloses a method for adjusting the frequency response of subwoofer systems comprising the steps of: receiving user adjustable settings (16)(Fig. 1; column 4, lines 6-29), the user-adjustable settings comprising: a setting that is purely indicative of a main speaker characteristic (S1,S2,crossover,delay) (Figs. 4-8; column 5, line 51 to column 6, line 37); and a setting that is not purely indicative of a main speaker

characteristic (LF,RF,F,LR,RR,R,ALL)(Figs. 4-6); and producing a desired subwoofer signal (44,46) in response to receiving the user-adjustable setting (Figs. 3, 4, 5, and 6; column 2, lines 46-53).

30. Claim 28 is essentially similar to Claim 9 and is rejected for the reasons stated above apropos to Claim 9.

31. Claim 29 is essentially similar to Claim 10 and is rejected for the reasons stated above apropos to Claim 10.

32. Claim 30 is essentially similar to Claim 11 and is rejected for the reasons stated above apropos to Claim 11.

33. Claim 31 is essentially similar to Claim 12 and is rejected for the reasons stated above apropos to Claim 12.

34. Claim 32 is essentially similar to Claim 13 and is rejected for the reasons stated above apropos to Claim 13.

35. Claim 33 is essentially similar to Claim 14 and is rejected for the reasons stated above apropos to Claim 14.

36. Regarding Claim 34, Ballard discloses a system for adjusting the frequency response of subwoofer systems comprising: means for receiving at least a user-adjustable setting (16)(Fig. 1; column 4, lines 6-29), the user-adjustable setting comprising a setting that is purely indicative of a main speaker characteristic (S1,S2,crossover,delay) (Figs. 4-8; column 5, line 51 to column 6, line 37); and a setting that is not purely indicative of a main speaker characteristic (LF,RF,F,LR,RR,R,ALL) (Figs. 4-6); means for receiving an input signal (32,34)(Figs. 2 and 3); and means for producing a desired subwoofer

signal (44,46) from the input signal (32,34) in response to the adjustable setting (Figs. 3, 4, 5, and 6; column 2, lines 46-53).

37. Claim 35 is essentially similar to Claim 16 and is rejected for the reasons stated above apropos to Claim 16.

38. Claim 36 is essentially similar to Claim 17 and is rejected for the reasons stated above apropos to Claim 17.

39. Claim 37 is essentially similar to Claim 18 and is rejected for the reasons stated above apropos to Claim 18.

40. Claim 38 is essentially similar to Claim 19 and is rejected for the reasons stated above apropos Claim 19.

Response to Arguments

41. Applicant's arguments filed 06/09/2005 have been fully considered but they are not persuasive.

42. With respect to Applicant's argument on page 12, stating that "Ballard discloses adjustments indicative of the response parameters of the equalizer, and not "a user interface configured to received at least one user-adjustable variable, the user-adjustable variable being purely indicative of a characteristic of a main speaker," as recited in claim 1", has been noted. However the Examiner respectfully disagrees. Ballard discloses a graphic user interface to make parameter adjustments to subwoofer channels (i.e. user-adjustable variable being purely indicative of a characteristic of a main speaker) via combination of mouse clicks and drags, or other manual control such as keyboard input.

Applicant discloses “characteristic of a main speaker”, which is not clearly defined in the claims and can be interpret as many things such as the response parameters of the equalizer because parameters adjustments to the subwoofer channel changes the output of the subwoofer which reads on “characteristic of a main speaker”.

43. With respect to Applicant’s argument on page 12, stating that “since Ballard fails to include the terms “speaker” or “main speaker,” logic would necessarily indicate that Ballard fails to disclose, teach, or suggest “a user interface configured to receive at least one user-adjustable variable, the user-adjustable variable being purely indicative of a characteristic of a main speaker,” as recited in claim 1”. However the Examiner respectfully disagrees. Ballard discloses the DSP unit outputs drive the system amplifiers and speakers. See column 3, lines 6-7.

44. With respect to Applicant’s argument on page 14, stating that “Ballard discloses adjustments indicative of the response parameters of the equalizer, and not a “method for adjusting the frequency response of subwoofer systems, comprising the steps of...receiving at least one user-adjustable setting, the user-adjustable setting being purely indicative of a main speaker characteristic...” as recited in claim 8”, has been noted. However the Examiner respectfully disagrees. Ballard discloses a graphic user interface to make parameter adjustments to subwoofer channels (i.e. receiving at least one user-adjustable setting, the user-adjustable setting being purely indicative of a main speaker

characteristic) via combination of mouse clicks and drags, or other manual control such as keyboard input. Applicant discloses “a main speaker characteristic”, which is not clearly defined in the claims and can be interpret as many things such as the response parameters of the equalizer because parameters adjustments to the subwoofer channel changes the output of the subwoofer which reads on “characteristic of a main speaker”.

45. With respect to Applicant’s argument on page 14, stating that “since Ballard fails to include the terms “speaker” or “main speaker,” logic would necessarily indicate that Ballard fails to disclose, teach, or suggest a “method for adjusting the frequency response of subwoofer system, comprising the steps of...receiving at least one user-adjustable setting, the user-adjustable setting being purely indicative of a main speaker characteristic...,” as recited in claim 8”. However the Examiner respectfully disagrees. Ballard discloses the DSP unit outputs drive the system amplifiers and speakers. See column 3, lines 6-7.

46. With respect to Applicant’s argument on page 15, stating that “Ballard discloses adjustments indicative of the response parameters of the equalizer, and not a “system for adjusting the frequency response of subwoofer systems, comprising means for receiving at least one user-adjustable setting, the user-adjustable setting being purely indicative of a main speaker characteristic” as recited in claim 15”, has been noted. However the Examiner respectfully disagrees. Ballard discloses a graphic user interface to make parameter adjustments to subwoofer channels (i.e. receiving at least one user-adjustable

setting, the user-adjustable setting being purely indicative of a main speaker characteristic) via combination of mouse clicks and drags, or other manual control such as keyboard input. Applicant discloses "a main speaker characteristic", which is not clearly defined in the claims and can be interpret as many things such as the response parameters of the equalizer because parameters adjustments to the subwoofer channel changes the output of the subwoofer which reads on "characteristic of a main speaker".

47. With respect to Applicant's argument on page 16, stating that "since Ballard fails to include the terms "speaker" or "main speaker," logic would necessarily indicate that Ballard fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer system, comprising means for receiving at least one user-adjustable setting, the user-adjustable setting being purely indicative of a main speaker characteristic," as recited in claim 15". However the Examiner respectfully disagrees. Ballard discloses the DSP unit outputs drive the system amplifiers and speakers. See column 3, lines 6-7.

48. With respect to Applicant's argument on page 17, stating that "Ballard discloses adjustments indicative of the response parameters of the equalizer, and not a "system for adjusting the frequency response of subwoofer systems, comprising a user interface configured to receive user-adjustable variables, the user-adjustable variables comprising: a first variable that is purely indicative of a main speaker characteristic" as recited in claim 20", has been noted. However the Examiner respectfully disagrees. Ballard discloses a graphic user interface to

make parameter adjustments to subwoofer channels (i.e. a first variable that is purely indicative of a main speaker characteristic) via combination of mouse clicks and drags, or other manual control such as keyboard input. Applicant discloses "a main speaker characteristic", which is not clearly defined in the claims and can be interpret as many things such as the response parameters of the equalizer because parameters adjustments to the subwoofer channel changes the output of the subwoofer which reads on "characteristic of a main speaker".

49. With respect to Applicant's argument on page 17, stating that "since Ballard fails to include the terms "speaker" or "main speaker," logic would necessarily indicate that Ballard fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer system, comprising a user interface configured to receive user-adjustable variables, the user-adjustable variables comprising: a first variable that is purely indicative of a main speaker characteristic," as recited in claim 20". However the Examiner respectfully disagrees. Ballard discloses the DSP unit outputs drive the system amplifiers and speakers. See column 3, lines 6-7.

50. With respect to Applicant's argument on page 19, stating that "Ballard discloses adjustments indicative of the response parameters of the equalizer, and not a "method for adjusting the frequency response of subwoofer systems, comprising the steps of: receiving user-adjustable settings, the user-adjustable settings comprising: a setting that is purely indicative of a main speaker

characteristic" as recited in claim 27", has been noted. However the Examiner respectfully disagrees. Ballard discloses a graphic user interface to make parameter adjustments to subwoofer channels (i.e. a setting that is purely indicative of a main speaker characteristic) via combination of mouse clicks and drags, or other manual control such as keyboard input. Applicant discloses "a main speaker characteristic", which is not clearly defined in the claims and can be interpret as many things such as the response parameters of the equalizer because parameters adjustments to the subwoofer channel changes the output of the subwoofer which reads on "characteristic of a main speaker".

51. With respect to Applicant's argument on page 19, stating that "since Ballard fails to include the terms "speaker" or "main speaker," logic would necessarily indicate that Ballard fails to disclose, teach, or suggest a "method for adjusting the frequency response of subwoofer systems, comprising the steps of: receiving user-adjustable settings, the user-adjustable settings comprising: a setting that is purely indicative of a main speaker characteristic," as recited in claim 27". However the Examiner respectfully disagrees. Ballard discloses the DSP unit outputs drive the system amplifiers and speakers. See column 3, lines 6-7.

52. With respect to Applicant's argument on pages 20-21, stating that "Ballard discloses adjustments indicative of the response parameters of the equalizer, and not a "system for adjusting the frequency response of subwoofer systems, comprising: means for receiving user-adjustable settings, the user-adjustable

settings comprising: a setting that is purely indicative of a main speaker characteristic" as recited in claim 34", has been noted. However the Examiner respectfully disagrees. Ballard discloses a graphic user interface to make parameter adjustments to subwoofer channels (i.e. a setting that is purely indicative of a main speaker characteristic) via combination of mouse clicks and drags, or other manual control such as keyboard input. Applicant discloses "a main speaker characteristic", which is not clearly defined in the claims and can be interpret as many things such as the response parameters of the equalizer because parameters adjustments to the subwoofer channel changes the output of the subwoofer which reads on "characteristic of a main speaker".

53. With respect to Applicant's argument on page 21, stating that "since Ballard fails to include the terms "speaker" or "main speaker," logic would necessarily indicate that Ballard fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems, comprising: means for receiving user-adjustable settings, the user-adjustable settings comprising: a setting that is purely indicative of a main speaker characteristic," as recited in claim 34". However the Examiner respectfully disagrees. Ballard discloses the DSP unit outputs drive the system amplifiers and speakers. See column 3, lines 6-7.

Conclusion

54. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is

(571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2

June 20, 2005

XU MEI
PRIMARY EXAMINER